subscribers and to increase their viewership over time.[3] Consumers benefit because they learn about and watch programming to which they otherwise would not have been exposed. Advertisers on cable program services reach larger audiences, which results in larger payments to program services for advertising spots. A significant element of the value created by a cable operator thus involves the selection of the programs that comprise its line-up.

In creating service tiers that maximize its net revenues, a cable operator balances several objectives.[4] First, the operator will wish to combine program services that may initially trigger the subscription decision among different, large customer populations.[5] For example, the operator may choose at least one major program service from such broad program categories as sports, news, and movies.

Second, and in support of the first objective, the operator may wish to create "clusters" of similar programming within each category. The clusters should offer sufficient variety and quality to promise a would-be subscriber a high

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[3] Another reason for offering tiers is that the administrative costs of offering a service à la carte often will exceed the value of the service to subscribers and advertisers.

[4] The net revenues to which we refer here are the difference between the cable operator's subscriber and advertiser revenues and the payments for programming. These revenues are the amounts available to cover the incremental costs of activating the channels; the costs of constructing, maintaining, and rebuilding the system; any costs that do not depend on the number of services carried; and the operator's profits.

[5] An analogy can be drawn to a shopping mall that has a number of "anchor" stores inducing large numbers of shoppers to visit the mall. Those shoppers may also patronize other stores while visiting the mall but not all shoppers will purchase at the same stores.

probability of finding a desirable program service within the category.[6] For instance, within the sports category, the operator may want to combine on one tier services that cover all the major sports at the national, regional, and local levels.

Finally, the operator hopes that customers subscribing in order to view a subset of program services will eventually sample some of the other program services on the tier. Thus, while the programming on a tier should be sufficiently varied to attract different audiences initially, it also should be sufficiently similar in some dimensions that customers attracted to one set of services also will be attracted to others. An important strategy for cable operators to adopt in the pursuit of such audience spillovers is the maintenance of consistent quality across the services offered on a tier.

Because of the significant spillovers that exist among program services offered on tiers, the role of the cable operator in coordinating the packaging of programming is essential to maximizing the value of program services. Participants in the cable industry — operators, programmers, advertisers, and subscribers — will all be better off if the Congressionally-mandated provision of leased access channels is achieved with a minimum of disruption to the cable operator's coordinating function.

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[6] Here, the analogy is to a section of a city in which a number of stores provide similar products, so that a shopper who wants such a product can patronize the area confident that he or she will find something to purchase

b. The Enforcement of Programming and Promotional Effort on Service Tiers

In addition to assembling diverse and complementary programming on value-maximizing service tiers, the cable operator fulfills an important enforcement function. In this role, the operator ensures that individual programmers maintain standards of high quality and undertake the appropriate promotional activities to enhance the tier's total subscription and advertiser revenues. Absent the discipline imposed by the cable operator, the cable television product would be less attractive and all programmers, advertisers, and viewers would be worse off.[7]

Combining programming on service tiers has the potential to create value because of the spillover of audiences among program services that would not necessarily occur if the services were offered on an à la carte basis. However, without appropriate safeguards, this very spillover can lead to the degradation of programming services because each service in the tier has an incentive to "free-ride" on the quality of other program services, and to skimp both on production efforts and on program promotional campaigns. By free-riding, an individual program service may increase profits through avoiding expenditures it would otherwise undertake. If all program services on a tier choose to free-ride, however, all will be worse off. The quality of programming will suffer, too little

[7] Of course, the system operator also would be worse off because the value of its overall service would be diminished.

promotion will be undertaken, and subscriber and advertiser revenues will fall. An important role of the cable operator is to monitor the products of program services and ensure that free-riding does not occur. Cable operators have proven over time to have a cost advantage over others in accomplishing this objective.

Because a program service offered on a cable tier has an incentive to reduce its own expenditures on the production of quality programming and to free-ride on the programming efforts of other services on the tier, i.e., to degrade its program quality, the carriage contract may specify the nature and particular mix of programming that must be provided. For example, a carriage contract for a sports channel may specify that a minimum number of hours for particular national or regional sports coverage be made available over a given time interval. Similarly, limitations may be placed on the number of hours that can be devoted to home-shopping services or infomercials on an entertainment service. These contractual terms protect against degradation in the quality of a program service after it gains carriage on a cable system.

As with production efforts, the ability to free-ride on the promotional efforts of other program services creates an incentive among all program services on tiers to cut back on their own promotional activities. Promotion by an individual service increases not only the service's audience but also, through spillovers, the audiences of other services on the same tier. While an individual service can be better off adopting such a free-riding strategy, universal free-riding would hinder the tier's ability to attract subscriber and advertiser dollars and would reduce the profitability of all services. Again, the cable operator fulfills a useful role by adopting and enforcing minimum promotional standards in contracts with program services. Contracts may specify particular actions that the program service must undertake, such as producing a certain number of minutes of promotional advertising, or placing a number of advertisements (of a particular size or prominence) in the local newspaper

c. *The Role of Payment Flows in Facilitating Team Production*

The structure of the payment flows between the operator and the program services guides the operator and the program services to undertake that level of effort that maximizes subscriber and advertiser revenues.[8] This structure does not exist by chance. The division of tasks and the flow of payments between an operator and programmers have proven to be an efficient means for delivering a valuable cable program service.

An important feature of the payment flows is that the cable operator retains a portion of subscriber revenues. The operator also may earn revenues from the sale of local advertising spots, which, in turn, depend on the number of

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[8] A.A. Alchian and H. Demsetz, "Production, Information Costs, and Economic Organization," American Economic Review, 62(5), 1972, pp. 777-795, explain the diverse structures of economic relationships as the outcome of efficient responses to metering and rewarding production that is the joint effort of multiple input providers.

subscribers. Because its profitability is tied to its success in attracting subscribers, the operator has incentives to select the mix of cable programming that is most valued by subscribers and advertisers. The cable operator's role, as discussed above, consists of coordinating program services and monitoring both product quality and the promotional activities that programmers undertake.[9]

An economic arrangement between cable operators and multiple program services that differs from the one in place today would produce a less valuable cable service product.[10] If program services were merely to lease channels that are passively provided by the cable operator, the operator would not have the same incentives or ability to coordinate the packaging of services. If, nonetheless, service packages were assembled (by a collection of programmers, for example), the overall quality of programming would suffer due to free-riding on each other's programming efforts. Free-riding also would lead to diminished promotional efforts on the part of the programmers and the cable operator. If admission of leased access programming to service tiers is mandated, the free-

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[9] The cable operator also furnishes important inputs to the delivery of program services. The operator provides the physical connection between program services and subscribers. Furthermore, the operator has frequent contact with subscribers through monthly billings and through its own local promotional efforts. These elements of the cable operator's performance often are specified in contracts with the program services as well. Finally, the information obtained by the operator about consumer preferences can be shared with program producers.

[10] One programmer, noting that affiliate contracts are a better way of doing business than buying leased access time, observed that, "It's the difference between getting a date from an escort service and having a relationship." See "No Lease on Life?," Multichannel News, April 1, 1996, p. 1.

riding problems that harm programmers will be introduced into the provision of cable services on tiers. We turn next to this problem.

3. Leased Access as an Alternative Arrangement Between Programmers and Cable Operators

For most of the cable television industry's history, the majority of programming decisions have been made by cable operators, with channel leasing representing a relatively minor phenomenon. In order to remedy what was perceived as a concentration of control in the hands of the single cable operator in each television market, Congress provided for a system of statutory leased access in the 1984 Cable Act and extended this provision in the 1992 Cable Act. Regulation of the terms on which leased access was to be provided was left to the Federal Communications Commission.

Under a leased access arrangement, a cable operator makes available channel capacity to program services in return for a periodic access fee. In turn, the services obtain revenues from some combination of subscriber revenues,[11] advertising receipts, merchandise sales, and viewer contributions, from which they must recover their programming costs and the access fee they pay to the operator.

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[11] The leased access programmer obtains subscriber revenues only if the service is offered on an à la carte basis.

The differences between the current financial arrangements and those under leased access are not superficial. Indeed, they have real implications for the types and quality of programming that are produced and the responsiveness of a cable operator to viewer preferences. In particular, leased access arrangements shift decisionmaking, coordination, and quality enforcement from a cable operator to a multiplicity of individual program services. As the cable industry currently is structured, the system operator has incentives to coordinate and monitor programmer behavior in a manner that maximizes the total value of the packages it offers. In contrast, under leased access arrangements, no central party would coordinate the packaging of program services, and each service would have both an incentive and an opportunity to free-ride on the investments of other services. The result would be a cable product that is less attractive to subscribers and advertisers.[12]

Consumers and advertisers suffer from this lack of coordination when channel lessees find it more profitable to duplicate popular service programming, and thus fragment audiences, rather than provide innovative programming that

[12] It is interesting to note that early radio broadcasting was characterized largely by "time sales" -- a form of leased access -- to advertiser/programmers (with little or no involvement by the networks in programming decisions) and that early television followed this model. However, this arrangement was subsequently abandoned in favor of a system in which program choices were made by the television networks themselves, in part to facilitate coordination in program development and scheduling. See Federal Communications Commission, Network Inquiry Special Staff, Background Reports to New Television Networks: Entry, Jurisdiction, Ownership, and Regulation, Volume II, 1980, pp. 51-53; 96-99

viewers would value more highly. If the cable operator controls what is carried, it will offer more differentiated program services.[13]

One might assume (erroneously) that leased access programmers could achieve the same degree of coordination through private negotiations as could be obtained through a centralized activities of the cable operator. The problem is similar to that described by Davis and Whinston in their analysis of urban renewal.[14] Davis and Whinston observe that "...the fact that the value of any one property depends in part upon the neighborhood in which it is located seems so obvious as to hardly merit discussion."[15] They go on to note, however, that "....while it might be easy for...two property owners...to coordinate their decisions, this would not appear to be the case as the number of individuals increased...."[16]

Leased access program services also have incentives to free-ride on the spillover value of other program services without internalizing their own impact, which may be negative, on other services. The cable operator does not play the same role in monitoring programmers' product quality and promotional efforts when it is only a passive supplier of leased channel capacity. While the services on leased access channels benefit from audience spillovers from other

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[13] On this point see, P.O. Steiner, "Program Patterns and Preferences, and the Workability of Competition in Radio Broadcasting," 66 Quarterly Journal of Economics 194 (1952), pp. 194-223.

[14] O.A. Davis and A.B. Whinston, "Economic Problems in Urban Renewal," in E. Mansfield (editor), Microeconomics: Selected Readings (Second Edition), New York: W.W. Norton, 1975, pp. 579-590.

[15] Ibid., p. 580.

[16] Ibid., p. 583.

programming on the tier, they are under no compulsion to create similar positive spillovers for those other services. When leased access programs free-ride on the efforts of other services and underinvest in their own program quality,[17] subscriber and advertiser revenues fall for all program services and for the cable operator as well.

4. <u>The Commission's Implementation of the Leased Access Fee</u>

The implementation of the mandatory leased access rule will have implications for the magnitude of the distortion introduced into what otherwise would be normal market transactions. Aware of this, the Commission has, in the past, attempted to impose pricing rules for leased access capacity that were not unduly binding on operators but that, at the same time, would limit leased access prices to feasible levels for access programmers.

In its current proposal, however, the Commission specifies new terms that may fundamentally alter the nature and viability of the cable service product. In addition to cable operators, programmers, advertisers, and cable subscribers will all be harmed if the Commission's proposal is adopted. The only beneficiaries will be the leased access services whose entry is made possible by subsidies from those other industry players. This section points out the pitfalls of the Commission's new proposal.

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[17] Underinvestment occurs relative to the level of investment that would be observed if the services were all coordinated by a cable operator that internalized the spillovers among services.

a. The Commission's Current Approach

Under current regulation, a cable operator may charge a channel lessee no more than the maximum implicit access fee that it charges to the cable program services it carries. The implicit access fee measures the incremental net revenues that an operator obtains from carrying a service, and is calculated as the difference between the incremental subscriber and local advertising revenues that accrue to the operator minus the affiliate fee the operator pays to the program service.[18] A low explicit access fee may create incentives for program services paying higher implicit access fees to elect instead to become leased access programmers. Because such "migration" by existing program services would impose an unintended cost on operators, the Commission provided that leased access fees could be set as high as the maximum implicit access fee, but no higher.

Although the manner in which the Commission has calculated the maximum implicit access fee results in too low a ceiling for the explicit access fee, there has, in fact, been little or no program migration.[19] This is in part

[18] For a locally produced program, the deduction is for production costs instead of affiliate fees. For home-shopping services, system revenues take the form of sales commissions and there are no payments to the program service. The implicit leased access fee concept apparently appeared first in S.M. Besen and L.L. Johnson, An Economic Analysis of Mandatory Leased Channel Access for Cable Television, The Rand Corporation, R-2989-MF, December 1982.

[19] The Commission's formula calculates the maximum implicit access fee as the difference between the per-channel subscriber fee and the lowest affiliate fee. The program service with the highest implicit access fee almost certainly has a higher subscriber value and a higher affiliate fee than is suggested by this calculation. These biases do not appear to be offsetting, and we believe that the Commission's current formula results in access fees that are significantly lower than the true maximum implicit fee.

because programmers carried on a service tier obtain spillover benefits that are not available if they migrate to à la carte status. However, the Commission has recently proposed fundamental changes in the way in which it regulates leased access.

b. The Commission's New Proposal

Under the Commission's new proposal, the ceiling on the leased access fee would be the "opportunity cost" to the operator of the existing program services that are displaced by leased access programmers.[20] However, the Commission's proposal for estimating opportunity cost would apparently result in leased access fees that are at or near zero, clearly understating the true opportunity cost of displaced services. In addition, the proposal would permit leased access programmers to be placed on a basic service tier. Together these changes could result in significant displacement of existing and future subscriber-supported services. Any displacement of existing cable program services by programs on leased access channels has the potential to reduce significantly the return not only to the displaced services but also to the incumbent programmers that remain on the tier.[21] These harms stem from two effects of the Commission's new proposal.

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[20] Significantly, the Commission seems unconcerned with the possibility that the lower access fees resulting from its proposal may lead to the very migration of existing services that its current regulatory regime is designed to prevent.

[21] Of course, cable operators suffer an indirect harm when the programming product is not as valuable as it would be otherwise. However, this is the same harm identified in the previous

c. ***The Bias Against Subscriber-Supported Programming on Service Tiers***

The Commission's proposal to permit leased access services to be placed on tiers would result in the displacement of both incumbent and developmental-stage programming. Existing services obtain a significant share of their revenues from affiliate fees but would lose those fees if they leased a channel on a service tier. The subscriber-supported services on tiers today would be unable to pay explicit leased access charges without the revenues from such fees; the economics of home-shopping and infomercial programming imposes no such limitation. Thus, program services that depend heavily on affiliate fees derived from direct subscriber payments will be unable to compete for the leased access channels on service tiers against services supported by merchandise sales, advertising revenues, and viewer contributions. If the cable operator is required to accommodate leased access programming on service tiers, existing services with high values will be competitively handicapped and will be displaced by services offering lower value. Similarly, new services that are not wholly advertiser-funded will be unable to bid for channels occupied by leased access services on tiers, even when these new services promise greater value to subscribers, advertisers, and complementary program services on the tier.

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paragraph where it was noted that the Commission's formula does not fully compensate system operators for the opportunity cost of providing leased access.

While the intended benefit of the leased access ruling is to enhance the diversity of programming available on cable systems, this benefit is not without costs, and, in the extreme, may not be achieved at all. Only a narrow subset of programming services, those relying solely on product and advertising sales, can survive economically on a leased access channel on a service tier. The race among new and existing home-shopping networks and suppliers of infomercials for carriage on tiers may quickly fill the available leased access channels.

Although audiences and advertisers may not value saturation of home-shopping and infomercial services, this is what they will get because the historical ability of the cable operator to coordinate programming and to select the best quality from among diverse services will be obstructed by the requirement that leased access capacity be made available on tiers. Both displaced services and new services that would otherwise have been introduced but for the leased access services occupying capacity on the tier will be harmed.

d. The Diminution of Positive Spillovers Among Program Services

Implementation of the Commission's proposal would also inflict harm on those program services that are <u>not</u> displaced when leased access programmers are placed on a basic service tier. As we have already noted, the revenues of any one service depend on the other services with which they are packaged. Just as program services benefit when they are combined with stronger services, or with other services that appeal to the same "cluster" of viewers, the same services are harmed if they are denied the benefits of these spillovers. As weaker leased access programmers displace stronger cable program services, the returns to the program services that remain on a cable system's basic service tiers will decline.

The harm to incumbent program services is analogous to the profits that would be lost by stores in a shopping mall that was required to accommodate stores selling to a very different customer base. Suppose, for example, that a mall catering to apparel shoppers is forced to displace some stores and accept in their place new stores that sell lawn and gardening equipment. These new stores would not attract customers with the same demographic characteristics as those that frequent the incumbent stores. As a result, the shoppers attracted to the mall by the new stores would be less likely to shop at the incumbent stores than were the shoppers that had patronized the displaced stores, thus causing a decline in the volume of business transacted by the incumbent stores.[22]

Even if the new customer base has the same propensity to shop at the incumbent stores as those customers previously drawn to the mall by the displaced store, the incumbent stores will be harmed if the new customer base is smaller. Again, the incumbent stores will suffer a decline in business.

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[22] The displaced stores will have either closed or moved to alternative outlets and taken some customers with them. (The alternative shopping outlets are analogous to DBS, MMDS, and other entertainment outlets in the cable service situation.) These displaced stores are harmed since, by their past behavior, they would have demonstrated that the first mall was their most profitable location.

Note that the quality of products offered in the new stores need not be inferior to that of the incumbents, but only different. The point is that the spillovers between the two types of stores are smaller than the spillovers among stores that the mall operator assembled in a value-maximizing shopping package. The fact that the new tenant was not the mall operator's first choice indicates that it will contribute less than the displaced tenant to the total value of the mall. Moreover, even if the new tenants were required to pay exactly the same rental fee for their space, and to compensate the mall owner for the value of lost spillovers, so that the mall operator was "made whole" as stores were displaced, the incumbent stores still would be worse off because their profits would be reduced by the diminished spillovers.[23]

Of course, it may also be the case that some shoppers at the mall actively dislike some of the new stores' products (chemical pesticides, for example), and elect to abandon the mall altogether in favor of a different shopping venue. That is, the spillover effect from the new tenants may be not only less positive, but even negative. In the cable context, not only will incumbent services realize diminished positive spillovers from the leased access services, but they may even feel a negative impact as subscriptions are canceled by people who find

[23] It is this foregone value of spillovers among services, not the simple rental fee, that is such a computationally difficult, but critical, element of the correct implicit access fee.

the "clutter" of home-shopping and infomercial services distasteful and annoying.[24]

In its proposal, the Commission appears not to have considered the economic harm to incumbent program services when the introduction of leased access services is facilitated. The Commission's current proposal to allow leased access programming on service tiers is likely to harm the very programming that benefits most from spillovers within a carefully planned cable service package. In addition, the Commission's proposal will hold leased access rates artificially low and subsidize the entry of precisely those services that cannot pay their way, or, equivalently, that will impose harm on cable operators, programmers, advertisers, and subscribers.

5. Conclusion

Cable operators perform important functions when they coordinate the programming on their service tiers and enforce programming and promotional efforts. Advertisers, subscribers, and the program services themselves all benefit as a result. Mandatory leased access prevents cable operators from performing their coordination and enforcement functions. Thus, valuable program services are displaced and the launch of new services is prevented because lower-value leased access programming is able to command capacity

[24] This effect can arise even when leased access services are added without causing any displacement of existing services.

on program service tiers. When channel lessees gain access to a program service tier, they free-ride on its value, which reduces the overall value of the cable program service package.

Even if the FCC were able accurately to determine the losses suffered by cable operators as a result of expanded use of leased access, and even if channel lessees were somehow able to compensate the operators for these losses, the harm to program services and subscribers would still remain. The cable program services that are displaced in spite of their greater value lose access to markets because they cannot compete for the leased access channels. Those program services that continue to be carried suffer because the overall quality of the other services with which they are associated on a tier is reduced. Finally, and most importantly, the service available to cable subscribers declines in quality as the entertainment and information programming they value is replaced by home-shopping services and infomercials that they find less appealing.